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# Warming ocean water a threat to predatory species, Woods Hole study determines

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By Responsible Seafood Advocate

## Authors urge a need to adapt and manage ecosystems proactively

Highly migratory predatory species like tuna, billfishes and sharks in the Northwest Atlantic Ocean and Gulf of Mexico could lose 40 to 70 percent of their suitable habitat due to warming ocean water, a new study has found.

The **study** (<https://www.science.org/doi/10.1126/sciadv.adi2718>), conducted by researchers at Woods Hole Oceanographic Institution in Massachusetts, USA, and published in the journal *Science Advances* this week, analyzed five species of tuna, four species of billfish and three shark species and predicted declines for each of them except the Atlantic blue marlin, which may actually gain a little in suitable habitat. Researchers used NASA modeling technology to map the relationship between the climate and the ocean, using decades of data.

“For several species, the predicted changes are already underway, which are likely to have substantial impacts on the efficacy of static regulatory frameworks used to manage highly migratory species,” the authors wrote. “The ongoing and projected effects of climate change highlight the urgent need to



Tuna, billfishes and sharks in the Northwest Atlantic Ocean and Gulf of Mexico could lose 40 to 70 percent of their suitable habitat due to warming ocean water. Photo by Matt Waters.

adaptively and proactively manage dynamic marine ecosystems.”

The study’s results indicate that most of the surveyed species will experience disproportionate change in either summer or winter, and a consistent northward displacement for nearly all species, which could lead to changes in pelagic biodiversity and in “human-wildlife interactions,” i.e., fishing. And as species move out of certain areas, while others of lower commercial value looking for warm waters may move in.



(<http://www.expalsa.com/>).

Furthermore, as temperatures increase, existing “life strategies” such as preferred spawning grounds, may no longer be viable, showing that potential habitat loss would have a “domino” effect.

**Read the full study.** (<https://www.science.org/doi/10.1126/sciadv.adi2718>).

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